Borough and Port of Lowestoft.

THE

ANNUAL REPORTS

OF THE

Medical Officer of Health

FOR

1906.

Lowestoft:
FLOOD & SON, LTD., Borough Printing Works,
The Grove.

SANITARY COMMITTEE.

MR. COUNCILLOR B. S. BRADBEER, *Mayor.*
MR. ALDERMAN J. BECKETT, *Chairman.*

ALDERMEN :

W. MOBBS
A. STEBBINGS

COUNCILLORS :

H. R. BOARDLEY
W. BERRY
W. H. CADGE
A. B. CAPPS
H. H. COPEMAN
C. Y. FRY
J. HARROLD
H. LE GRICE
J. JACKMAN
G. B. RIX
J. SMITH
E. TUTTLE
A. J. TURNER

ISOLATION HOSPITAL SUB-COMMITTEE.

MR. COUNCILLOR E. TUTTLE, *Chairman.*

COUNCILLORS :

W. BERRY
W. CADGE
H. LE GRICE
J. SMITH

STATISTICAL SUMMARY.

Area of the Borough	(acres)	**2,306**
Estimated Population		**33,946**
Rateable Value		**£141,227**
Birth Rate		**28·8**
Gross Death Rate		**13·3**
Rate of Infantile Mortality (per 1,000 births) ..		**128**
Zymotic Deaths Rate		**1·55**
Mean Temperature		**49·2**
Rain Fall	(inches)	**23·20**
Duration of Bright Unclouded Sunshine ..	(hours)	**1993**

To the Mayor, Aldermen and Councillors of the Borough of Lowestoft.

Gentlemen,

I have the honour to present to you the Annual Statistical Report for the year 1906.

The population as enumerated at the census taken on the night of 31st March, 1891, was 23,490. The enumeration at the census of 1901 gave a population of 29,850. The population estimated to the middle of 1906, was 33,946.

The Birth Rate shows an increase of 0·6 per 1000 population.

The Death Rate is 0·3 per 1000 population below the average for the past ten years.

The scheme for draining most of the rural portions of the Borough bids fair to become an accomplished fact.

The very necessary additions to the Refuse Destructor are on the eve of being carried out.

Special interest is attached to Table VII.

I am, as usual, indebted to Mr. Edwards, F.R.Met.Soc., for his assistance in the compilation of this report.

ON THE MARRIAGE & BIRTH RATES.

Two hundred and eighty-two *marriages* have been registered as having occurred within the borough. This is equivalent to a gross *marriage rate of* 16·6 *per* 1000 *per annum*. In the previous year the number of marriages was 277, and the year before that 274.

The total number of *births* registered was 979, which is equivalent to a *birth rate of* 28·8 *per* 1000 *per annum*, as against 28·2 for 1905.

The accompanying table shows the quarterly distribution of births as to rate, sex and legitimacy :—

Period.	Legitimate. Male.	Legitimate. Female.	Illegitimate. Male.	Illegitimate. Female.	Total Births.	Rate per 1000.
1st Quarter ..	104	110	7	7	228	27·3
2nd ,, ..	142	108	3	10	263	31·1
3rd ,, ..	105	100	6	3	214	24·4
4th ,, ..	140	125	6	3	274	32·4
Totals ..	491	443	22	23	979	28·8

Over $4\frac{1}{2}$ per cent. of the births were illegitimate.

GENERAL MORTALITY STATISTICS.

Four hundred and fifty-three deaths were registered. The *gross annual rate of mortality per thousand of the estimated population is* 13·3. By excluding thirteen deaths which occurred among "non-residents" *i.e.*, among "persons brought into the district on account of sickness or infirmity, and dying in public institutions"; and again by including 35 deaths in Oulton Workhouse, we obtain a corrected total of 475 and a *corrected death rate of* 13·9 *per* 1000 *per annum.*

Of 173 deaths which occurred under the age of five years, 32 were due to Zymotic Enteritis, 6 to Whooping Cough, and 6 to Measles: 126 of these 173 deaths were in infants under one year, the rate of *Infantile Mortality* being 128 per 1000 births. The rate for 1905 was 112. In 1904 it was 142. The present figure is 14 below the average for the previous ten years.

In the following table, deaths are apportioned according to the locality in which they occurred.

	Population.	Deaths.	Death Rate.
North Ward	9664	151	15·2
South ,, ...	8526	106	12·2
East ,, ...	6229	94	15·1
West ,, ...	9527	124	13·1
Totals	33946	475	13·9

Special attention is called to Table VII. in the Appendix, which shows that in the mortality from the principal Zymotic Diseases the rate for this borough is lower than that for England and Wales, considerably lower than the 76 great towns, lower than the 142 smaller towns, and only 0·3 higher than the rest of England and Wales.

The same applies to Measles. The rate for Scarlet Fever is less than any of the above divisions, the rate for England and Wales being exactly double.

The rates for Diphtheria, Whooping Cough and Fever, including Enteric Fever, are less than England and Wales, or any of the divisions.

MORBIDITY.

During the year 225 cases of notifiable diseases came under observation.

Their locality and age distribution are shown in the Appendix, Table III., and in Table VI. will be found an analysis of infectious cases reported since the adoption of the Notification Act.

I prefix my remarks on the various infectious diseases by the following Table of the number of notifications received and deaths registered :—

	Cases notified in 1906.	Deaths registered in 1906.
Small-pox	—	—
Scarlet Fever	101	2
Diphtheria	37	5
Membraneous Croup	—	—
Typhus Fever	—	—
Enteric or Typhoid Fever	17	1
Continued Fever	—	—
Relapsing Fever	—	—
Puerperal Fever	2	2
Cholera	—	—
Erysipelas	21	2
Plague	—	—
Chicken Pox	47	—

SMALL POX.

No cases of this disease occurred in the Borough during the year.

CHICKEN POX.

Payment for the notification of this disease was discontinued after the first quarter, previous to this there were 47 notifications received.

ENTERIC (TYPHOID) FEVER.

An exceedingly satisfactory feature in this report is the maintenance of the reduction in the number of notified cases alluded to in the last annual returns.

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
North Ward ..	1	1	1	5	8
South Ward ..	2	—	2	1	5
East Ward ..	—	—	—	—	—
West Ward ..	2	—	—	1	3
Port	—	—	1	—	1
Totals ..	5	1	4	7	17

Nine cases were admitted to the Isolation Hospital. All made good recoveries. Two of these were found, on admission, to be suffering from Pneumonia, and gave a negative result to Widal's test. Of the remainder three were unquestionably imported.

DIPHTHERIA.

Thirty-seven cases were notified, as against 47 for last year, 27 of which were removed to the Isolation Hospital. Five deaths were registered, two in their own houses, and three in the Isolation Hospital.

From the accompanying Table it will be seen where the disease prevailed.

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
North Ward ..	9	1	1	1	12
South Ward ..	2	2	3	3	10
East Ward ..	4	1	1	1	7
West Ward ..	3	1	1	3	8
Totals	18	5	6	8	37

The number for the last 17 years will be seen on reference to the Appendix, Table VI.

On reference to Appendix A, Table III., it will be seen that by far the largest number of cases of Diphtheria occurred in the age group 5 to 15, viz. : 19 or just half the total number notified, the next largest number in age group 1 to 5.

It is gratifying that the total number of cases is ten less than last year ; also that there has been a decreasing prevalence of this disease since 1900.

SCARLET FEVER.

The following table expresses in a short space the localities from which this disease was reported, and also the time of the year in which it occurred, the largest number of cases being reported from the North Ward, followed by the East, West and South respectively. There was a total of 101 cases as compared with 33 for last year, by far the largest number occurring in the fourth quarter.

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
North Ward ..	2	—	9	33	44
South Ward ..	2	4	3	6	15
East Ward ..	1	—	3	21	25
West Ward ..	—	1	3	13	17
Totals	5	5	18	73	101

Reference to Table III. in the appendix shows the number in age groups and localities. A study of this Table is interesting, as it shows that the largest number, 45, or nearly half (total notified being 101), occurred in age group 5 to 15, or school age ; the next largest number, 30, occurred in age group 1 to 5.

Again, reference to Table III. in the Appendix will show that there were treated in the Isolation Hospital, 35 from the North, 8 from the South, 22 from the East, and 12 from the West Wards ; a total of 77.

WHOOPING COUGH.

This disease accounted for 6 deaths, 2 being under one year of age and 4 in the age group 1-5 years. Four occurred in first quarter, two in second quarter, none in third quarter, and none in fourth quarter. The total number of deaths was 9 less than last year.

ZYMOTIC ENTERITIS.

The abnormally prolonged, hot, dry summer exacted its toll of deaths from this disease to the extent of thirty-three, this being an increase of 25 on last year's total.

The temperature registered by the four feet earth thermometer reached 56° Fah. on 27th June, and fell to below 56° Fah. on 20th October.

PHTHISIS.

A letter was received in March from the National Association for the Prevention of Consumption and other forms of tuberculosis, and the Town Clerk was directed to supply a copy of the letter to each member of the Committee, and the further consideration of the same was deferred to the next monthly meeting.

At that meeting the letter from the National Association for the Prevention of Consumption and other forms of tuberculosis (a copy of which had been supplied to each member of the Committee) was further considered.

The Committee recommend that the Town Clerk be directed to apply to the Local Government Board for their approval to an order being made extending the provisions of the Infectious Diseases (Notification) Act, 1889, to Phthisis, and that the Town Clerk be directed to give the necessary notices.

Subsequently a letter dated 30th inst. was received from the Local Government Board as to the proposal to include phthisis among the diseases compulsorily notifiable in the Borough that they are not prepared to assent to such a proposal, and suggesting a voluntary notification of the disease. This suggestion was not carried out.

ANTHRAX.

Owing to the energetic and efficient measures which were taken over the death of the bullock, reported on the 19th December, 1905, no extension of the disease took place, and no fresh outbreak has been reported during 1906.

SWINE FEVER.

The Order of the Board of Agriculture applying the provisions of the Swine Fever Order of 1906 to the Borough of Lowestoft was considered early in the year, and it was resolved that the Deputy Chief Constable be appointed to issue movement, and other necessary licenses, *and the Committee recommend that the Common Seal of the Council be affixed to the appointment.*

A further letter was read from the Board of Agriculture and Fisheries, as to their general policy with reference to swine fever and with reference to the widening of present areas subject to Swine fever Orders with a view to the easier movement of swine.

THE BOROUGH ISOLATION HOSPITAL.

One hundred and twenty-six cases were under treatment during the year: 114 cases were admitted, 88 were discharged, 4 died, and there were 34 remaining on 31st December.

The diseases treated were Scarlet Fever, Diphtheria, and Typhoid Fever. The number of cases of each disease, with the result, is stated in the subjoined table. The locality from which they came is shown in the Appendix, Table III.

	Scarlet Fever.	Diph-theria.	Typhoid Fever.	Total.
Remaining 1st January ..	5	6	1	12
Admitted	77	27	10	114
Discharged	54	26	8	88
Died	1	3	—	4
Remaining 31st December ..	27	4	3	34

In addition to the above a case of suspected infectious disease, probably Measles, was removed from a Scotch fishing boat, and isolated for twenty-four days.

WATER SUPPLY.

The public water supply has been kept under the strictest observation, and, in addition to the frequent analyses made on behalf of the Company, a copy of which is invariably furnished for the Committee's information by the General Manager, a sample is submitted to a London analyst almost every month during the year. The following analysis will speak for itself.

THE CLINICAL RESEARCH ASSOCIATION, LIMITED.

1 Southwark Street,
London Bridge,
22nd October, 1906.

ANALYSIS.

To Dr. Marshall,

The specimen of water, marked "Public Supply," received here on 18th October, 1906, has been chemically examined, and I have been instructed to forward the following report thereon :—

	Grains per gallon.
Total Solids (dried at 120° C.)	19·60
Combined Chlorine	3·30
Expressed as Na Cl	5·46
Nitrogen as Nitrates	0·31
Nitrites	*nil*
Saline Ammonia	*nil*
Albuminoid Ammonia	0·008
Oxygen absorbed in 4 hours at 27° C.	0·055
Total Hardness	8·6°
Lead or Copper	*nil*

The water shows a slight improvement in the last sample analysed as albuminoid ammonia and oxygen absorbed are a little lower than in the last sample.

(*Signed*) R. BODMER, F.I.C.

C. H. WELLS,
Secretary of the Association.

A proposal of the Lowestoft Gas and Water Company to obtain water from the river Bure, below Horning Ferry, in Norfolk, to augment the supply of this Borough and a neighbouring town was not opposed by the Sanitary Committee, but the Bill was not passed by the House of Commons.

SANITATION.

Early in February a deputation, consisting of Messrs. A. G. Beckett (Chairman), S. Cox, M. C. Elwell, R. S. Stranack, W. Cookes, with Messrs. C. G. Taylor (Clerk) and R. S. Cockrill (Surveyor) of the Oulton Broad Urban District Council attended a meeting of the Sanitary Committee, with reference to a scheme of drainage for the Urban District through the Borough to the sea.

It was resolved that the whole matter be referred to a Sub-Committee, consisting of the Chairman (Mr. Alderman Beckett), Mr. Alderman Mobbs, Councillors Fry, Copeman and Cadge, with the Town Clerk and the Surveyor, for consideration with the deputation as a Sub-Committee of the Urban District Council, and report further to this Committee.

This scheme has been perfected, and has passed the Council, and when carried out will drain not only the Urban District of Oulton Broad, but the present undrained portions of this Borough.

WATER SUPPLY, OULTON STREET.

Attention to the surface wells in Oulton Street has again been called for. The Water Company's main has now been laid in this locality and the wells closed. A lengthy report on this subject was made, and the wells condemned, as far back as 1903, and re-published in my Annual Report for that year.

CENTRAL RAILWAY STATION.

The attention of the Great Eastern Railway Company was drawn to the loading of fresh fish at the Central Station, and to the offensive stench arising from fish drippings on the departure platform ; and it was asked that they would take steps to remove the cause of offence, and suggested that to do this all fish should be loaded outside the station.

All the platforms are now being concreted, which will enable them to be flushed down whenever necessary.

REFUSE REMOVAL.

Refuse is removed regularly, economically, and efficiently, as will be seen from the following figures :—

There are now in the Borough 8234 houses from which refuse is collected.

	No. of houses.
Daily Collections	1401
Bi-Weekly ,,	5435
Weekly ,, ...	604
Fortnightly ,, ...	794

Making the total number of emptyings 1,055,805, at a cost for labour of just nine-tenths of a farthing per collection.

During the year, 67 requests have been received for special refuse removal, as against 79 for 1905, and 90 for 1904. For 8234 houses the cost of labour was £996, or 2s. 5d. per house per annum, as against 2s. $5\frac{1}{4}$d. last year, 2s. 6d. the year before, and 2s. $6\frac{3}{4}$d. the year before that.

The question of the provision of new refuse removal carts has been taken up by the Committee, and carts with springs are to be provided, which will tend to minimise the nuisance caused by the rumbling of the old tumbrils during the night and early hours of the morning. Covers, among other improvements, are also to be introduced.

REFUSE DESTRUCTOR.

The Refuse Destructor has efficiently consumed about 12,600 tons of garbage and house refuse.

The following minutes explain the position of affairs with regard to the provision of additional cells as recommended in my last Annual Report.

"The Surveyor reported, at a Committee meeting, as follows with reference to the Destructor :—

"The Destructor is now working at its utmost capacity, the quantity of material to be dealt with having considerably increased during the last six years, and further, the time is rapidly approaching when the crowns of the cells will have to be renewed, and it is of the utmost importance to have the new cells erected before having to repair the old ones ; otherwise we should have to shut down and make arrangements for carting the refuse elsewhere.

"The Committee being of opinion that the additional two cells are urgently needed at the Destructor, *recommend that the same be provided and that the tender of the Horsfall Company to carry out the work for the sum of* £1159 *be accepted, and that subject to a sanction satisfactory to the Council to a loan for carrying out the work being received from the Local Government Board, a contract be entered into with the Company for carrying out the work, and that the Common Seal of the Council be affixed thereto.*

"*The Committee recommend that application be made to the Local Government Board for sanction to a loan of* £1230 *for carrying out the work, made up as follows—*

	£
Amount of tender	1159
Contingencies	71
	£1230

This was sent back to Committee by the Council, as the tender was an old one, having been procured about twelve months previously, the Council at that time failing to see the necessity for the work.

At the next meeting of the Committee, the Surveyor submitted a letter from the Horsfall Destructor Company, agreeing to construct the two additional cells at the Destructor at the same price as already quoted, viz. : £1159, and also submitted fresh specifications from the Company. The Town Clerk submitted a letter dated 19th inst. from Messrs. Meldrum Bros., as to constructing additional cells to the Destructor, *and the Committee recommend that the Surveyor be directed to advertise for tenders, specifications and plans for the extension and alterations to the Destructor and submit same to a future meeting.*

At the Adjourned Meeting held on Thursday, the 6th day of December, 1906, the Surveyor submitted four tenders for the extension of the Destructor by two cells, and for the necessary alterations to buildings, *and the Committee recommend that the tender of the Horsfall Destructor Company, of Leeds, at £1030, being the lowest tender, be accepted ; that a contract be entered into with them to carry out the work, and that the Common Seal of the Council be affixed thereto.*

SANITARY INSPECTOR'S REPORT FOR 1906.

Inspections, Houses and Premises	4505
Re-inspections	1050
Privies converted into Water Closets	7
Water Closets supplied with Water	86
Drains Smoke tested	40
Drains Water tested	243
House Drains Ventilated	2
House Drains Trapped	47
Blocked Drains Cleansed and repaired	71
Closets supplied under the Factory and Workshops Act	10
Gutting and Curing Yards inspected	906
Orders received for Dust Removals	67
Visits to Cow Sheds	16
Visits to Bake Offices	236
Bake Houses Whitewashed	124
Houses of Infectious Character Cleansed and Disinfected	180
Premises Re-drained	39
Dead Wells emptied	460
Connections to Public Sewer	68
Slaughter Houses Inspected	450
,, ,, Yards Re-paved	—
Milkshops Inspected	47

MEAT AND FOOD SEIZURES.

1	Live Steer
1	Cow
1	Forequarter of Beef
1	Shoulder of Mutton
1	Shin of Beef
5	Stone of Meat
2	Legs of Mutton
4	Joints of Pork
3000	Spring Herrings
1	Trunk of Skate
500	Mackerel
6	Trunks of Whiting
1	Case of Eggs
22	Dozen Cabbages
9	Pecks of Cockles

DISINFECTIONS.

Beds, Mattresses, Bolsters and Pillows	1192
Bed Clothing	1072
Personal Clothing	2697
Miscellaneous Articles	375
Sanatorium Mattresses, etc.	131
Personal Clothing	1240
Houses (including schools)	179
Rags	551
Hats	20
Total ..	7457

FOOD AND DRUGS ACT, 1899.

Appended is the report of the Inspector appointed by the County Council.

19th February, 1907.

A. MARSHALL, ESQ.,

Medical Officer of Health, Borough of Lowestoft.

DEAR SIR,

FOOD AND DRUGS ACT.

In reply to your letter of the 19th instant, I beg to inform you that the Police took 39 samples under the Food and Drugs Act during 1906, consisting of the following articles, viz. :—

21	Milks
7	Butters
4	Chocolates
2	Cream
2	Lard
1	Coffee Extract
1	Vinegar
1	Margarine
—	
39	
—	

All were genuine with the exception of seven milks, one of which was fined for added water, one cautioned for same thing (small quantity), one for containing boric acid, two for being slightly below the standard, and two artificially coloured.

Yours faithfully,

EDWD. C. SHIPP,

Supt. and D.C.C.

The following circular letter received from the Local Government Board, together with the circular issued by this authority, explain themselves sufficiently.

Circular.
Authorities under Sale of Food and Drugs Acts.

PRESERVATIVES IN MILK.

LOCAL GOVERNMENT BOARD,
WHITEHALL, S.W.,
11*th July*, 1906.

SIR,

I am directed by the Local Government Board to request the attention of the Council to the subject of the addition of preservatives to milk.

A serious objection to the use of preservatives in milk has been pointed out in the report of the Departmental Committee on Preservatives and Colouring Matters in Food who state that preservatives in milk "may be relied on to protect those engaged" in the milk traffic "against the immediate results of neglect of scrupulous cleanliness. "Under the influence of these preservatives milk may be exposed "without sensible injury to conditions which otherwise would render "it unsaleable. It may remain *sweet to taste and smell* and yet have "*incorporated disease germs* of various kinds, whereof the activity "may be suspended for a time by the action of the preservative, but "may be *resumed before the milk is digested*."

This Committee, after hearing evidence from milk traders, concluded that the addition of a preservative to milk is not necessary for the purposes of the milk trade, even in hot weather or where the supply of so large a place as London is concerned, and the Committee recommended that no preservatives should be added to milk.

In making this recommendation the Committee had special regard to evidence received as to two classes of preservative substances which, under various names, are frequently used as preservatives in milk, viz. (1) formalin (a 40 per cent. solution of formic aldehyde) and other preparations of formic aldehyde; and (2) boron preservatives (boric acid, borax, or mixtures of boric acid and borax). The Committee considered that the addition to milk of formalin or preparations of formalin, even when the amount which could be detected was minute, was objectionable, on account of the alterations effected by formalin

in the character of certain of the constituents of milk and of its ability to *interfere directly with digestive processes.*

Although in the view of the Committee boron preservatives might reasonably be employed in the case of certain foods, within defined limits and subject to a declaration as to their presence and amount, the Committee recommended their *exclusion from milk altogether ;* partly for the reasons above indicated, and partly also in consideration of the immense importance of pure milk for the nutrition of infants, invalids, and convalescents, and of the comparatively large quantity of milk which may be taken, particularly by children, in comparison with the other foods in question. Moreover the Committee had evidence " pointing to an injurious effect of boracised milk upon the " health of very young children."

Since the report of the Committee was made the Board have from time to time had before them further evidence on the subject, and this supports the conclusions of the Committee not only as to the objections to the use of preservatives on the ground of public health, but also as to the ability of milk traders to conduct their business without use of preservatives. Thus in certain boroughs in London and elsewhere in which milk samples are systematically tested for preservatives, the presence of preservatives in milk, at any time of the year, has been found to be exceptional ; and there is evidence to shew that a very large number of milk vendors conduct their business without the use of these substances, even where the milk comes long distances by rail.

In some districts action under the Sale of Food and Drugs Acts has been frequently and successfully taken in order to bring about the disuse of preservatives in milk. Proceedings instituted against vendors of milk containing preservatives have usually been taken under Section 6 of the Sale of Food and Drugs Act, 1875. Conviction has followed, it being *held that when the purchaser who asks for milk is supplied with milk plus a preservative he does not receive an article of the nature, substance and quality demanded,* and is prejudiced thereby.

The Board are of opinion that action under the Sale of Food and Drugs Acts in regard to preservatives in milk is desirable, and that this subject deserves attention from all authorities in England and Wales charged with the execution of these Acts.

In this connection the following suggestions are made for adoption by the Council where a similar procedure is not already followed :—

1. *Information from public analysts.*

The Board suggest that public analysts should be requested

(*a*) to record in their quarterly reports how many milk samples have been examined during the quarter with a view to ascertaining the presence of substances commonly in use as preservatives, and with what result ; and to draw the attention of the Council to instances where the use of preservatives in milk other than boron preservatives and formalin have come under notice ;

(*b*) to report, on completion of analysis, the facts as to samples of milk which have been found to contain any added preservative.

2. *Administrative action where preservatives in milk are reported.*

The Board would suggest that the Council *should notify to milk traders, by circular or otherwise,* that *action will be taken under the Sale of Food and Drugs Acts in instances where preservatives are reported in milk.*

Subject to this being done, and to exceptional cases of the kind referred to under the heading numbered 3 below, the Board consider that when the presence of any added preservative is reported in a sample of milk taken in accordance with the provisions of the Sale of Food and Drugs Acts, the case should in ordinary circumstances be regarded as one for the institution of proceedings under those Acts.

3. *Declaration and Notices.*

The Board think it desirable to draw attention to cases in which the *vendor of the milk,* with the *object of escaping liability* under Section 6 of the Sale of Food and Drugs Act, 1875, *declares to the purchaser* by means of a notice, label or otherwise that he *does not sell "milk" as such,* or that its quality in regard to preservatives or other constituents is not guaranteed, or that it *contains some added preservative.*

The Board would suggest the desirablity *of frequent sampling* in cases where "milk" is sold subject to declarations of the kind, with a view to ascertaining the condition of such milk in regard to preservatives.

The nature of the declaration made should in all cases be carefully recorded by the officer taking the sample, and should also be reported to the analyst when the sample is transmitted for analysis.

Where preservatives are reported in milk thus sold, the question will arise whether, in view of the nature and quantity of the preservatives added, it can be considered that the article has been rendered injurious to health, or that the purchaser has been prejudiced, to an extent which would justify the institution of *proceedings under Section* 3 or *Section* 6 of the Sale of Food and Drugs Act, 1875, *notwithstanding the declaration* made at the time of purchase.

This question is not without difficulty in view of the general objection to the employment of any preservatives in milk referred to above.

As regards formalin and boron preservatives, however, the Board are advised that the presence in milk of formalin to an amount which is ascertained by examination *within three days of collecting the sample to exceed* 1 *part in* 40,000 (1 part in 100,000 of formic aldehyde) raises a *strong presumption* that the article has been rendered injurious to health, and *that the purchaser has been prejudiced*, in the above sense ; and also that similar presumption is raised where *boron preservatives* are present in milk to an amount exceeding 40 grains of boric acid per gallon.

It appears desirable that the addition *of preservatives to skim milk, separated milk*, and *condensed milk*, should be watched and controlled on similar lines.

Additional copies of this Circular are enclosed for transmission to the public analyst, and for use by executive officers under the Sale of Food and Drugs Acts. The Circular will be placed on sale and

copies can then be obtained from Messrs. Wyman & Sons, Limited, 109 Fetter Lane, Fleet Street, London, E.C., either directly or through any bookseller.

I am, Sir,

Your obedient Servant,

S. B. PROVIS,

Secretary.

The Town Clerk, *or*

The Clerk to the County Council.

BOROUGH OF LOWESTOFT.

To Milksellers and others engaged in the Milk Trade.

CAUTION.

The attention of the Council has been called by the Local Government Board to the subject of the addition of preservatives to milk. The Departmental Committee on Preservatives and Colouring Matter in Food has reported that the addition of a preservative to milk is not necessary for the purposes of the milk trade, and that the use of preservatives is objectionable on the ground of its danger to the Public Health. And the Council hereby give notice that in cases where the Public Analyst reports that a sample of milk, taken for the purpose of analysis, contains any added preservative, legal proceedings will be taken against the seller under the Sale of Food and Drugs Acts.

By order of the Sanitary Committee,

R. BEATTIE NICHOLSON,

Town Clerk.

4th August, 1906.

The Medical Officer of Health and the Chief Sanitary Inspector were appointed by the Council as additional Inspectors under the above Act, owing to the small number of samples taken by the County Authority.

Partly on that account also the Committee referred to the Legal Parliamentary and Bye-laws Committee to consider the geographical position of Lowestoft, and its commercial and other interests with Norfolk, with a view of considering the advisability of the Borough being brought within the area of the administrative County of Norfolk, and reporting thereon to the Council, with the result that application has been made.

Thirteen samples of milk were taken by the Borough Inspector during the summer, all of which were returned by the analyst as genuine milks and free from preservative.

FACTORY AND WORKSHOPS ACT, 1901.

As heretofore the district is energetically looked after by H.M. Inspector at Norwich, and his Assistant, Mr. T. C. Hayward, who keeps us constantly posted up with information which is invariably acted upon.

Annual Report of the Medical Officer of Health for the year 1906, for the Borough of Lowestoft, on the administration of the Factory and Workshop Act, 1901, in connection with

Factories, Workshops, Laundries, Workplaces and Homework.

1.—Inspection.

Including Inspections made by Sanitary Inspectors, or Inspectors of Nuisances.

Premises. 1	Number of		
	Inspections. 2	Written Notices 3	Prosecutions. 4
Factories ... . (Including Factory Laundries)	35	—	—
Worshops ... ... (Including Workshop Laundries)	236	20	—
Workplaces ... . (Other than Outworkers' premises included in Part 3 of this Report)	906	53	—
Total	1177	73	—

2.—Defects Found.

Particulars. 1	Number of Defects.			Number of Prosecutions. 5
	Found. 2	Remedied. 3	Referred to H.M Inspector. 4	
*Nuisances under the Public Health Acts :—**				
Want of cleanliness	1	1	—	—
Want of ventilation	—	—	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	28	28	—	—
Other nuisances	—	—	—	—
† Sanitary accommodation — insufficient	—	—	—	—
† Sanitary accommodation — unsuitable or defective	—	—	—	—
† Sanitary accommodation — not separate for sexes	—	—	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	—	—	—	—
Other offences ... . (Excluding offences relating to outwork which are included in part 3 of this Report.)	—	—	—	—
Total ...	29	29	—	—

* Including those specified in Sections 2, 3, 7 and 8, of the Factory and Workshop Act, as remediable under the Public Health Acts.

† For districts not in London, state here whether Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the District Council; and if so, what standard of sufficiency and suitability of sanitary accommodation for persons employed in factories and workshops has been enforced.

3.—Home Work.

NATURE OF WORK.*	OUTWORKERS' LISTS, SECTION 107.								Number of Inspections of Outworkers' premises.	OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OWTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.				Numbers of Addresses of Outworkers received from other Councils.	Numbers of Addresses of Outworkers forwarded to other Councils.	Prosecutions.			Instances.	Notices served.	Prosecutions.	Instances.	Orders made S. 110)	Prosecutions (Sections 109, 110).
	Twice in the year.		Once in the year.				Failing to keep or permit inspection of lists.	Failing to send lists.							
	Lists. †	Outworkers.†	Lists.	Outworkers.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Wearing Apparel—															
(1) making, &c. ...	—	—	4	23	—	—	—	—	—	—	—	—	—	—	—
(2) cleaning and washing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lace, lace curtains and nets ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and Upholstery ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fur pulling	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paper Bags and Boxes ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brush making	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stuffed Toys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
File making	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electro Plate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cables and Chains ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anchors and Grapnels ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cart Gear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locks, Latches and Keys ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	—	—	4	23	—	—	—	—	—	—	—	—	—	—	—

* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 4 as the case may be) against the principal class *only*, but the outworkers should be assigned in column 3 (or 5) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2 and 3 are the *total* number of lists received from employers who sent them both in February and August as required by the Act and of the entries of names of outworkers in those lists. They will, therefore, usually be double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year. 1	Number. 2
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	
Total Number of Workshops on Register	341

5.—Other Matters.

Class. 1	Number. 2
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133)	—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) — Notified by H.M. Inspector ...	—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) — Reports (of action taken) sent to H.M. Inspector	—
Other	—
Underground Bakehouses, (s. 101) :—	
Certificates granted	—
In use at the end of the year.	3

NOTE.—The Factory and Workshop Act, 1901, (s. 132) requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, laundries, workplaces, or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

A. MARSHALL, D.P.H.,

Medical Officer of Health.

March, 1907.

SECTION 5. REGISTER OF WORKSHOPS.

A register of workshops has been kept.

A. MARSHALL, D.P.H.,
Medical Officer of Health.

TOWN HALL, LOWESTOFT.

SLAUGHTER HOUSES.

The slaughter houses have been regularly inspected, and as a rule are regularly lime-washed, in cases wherever necessary, extra lime-washing has been ordered. No complaints have been received. A public abattoir would be a step in the right direction.

MILK SHOPS.

There are 47 milk shops in the town, none of them have cowsheds connected with the premises. They have all been regularly inspected. No complaint has been received. There are four cowsheds in the rural portion of the Borough,

I have the honour to be,
Gentlemen,

Your obedient servant,

A. MARSHALL, D.P.H.

TOWN HALL, LOWESTOFT,
March, 1907.

PORT OF LOWESTOFT.

HEALTH REPORT FOR 1906.

The accompanying *Shipping Accounts* have been furnished by H.M. Collector of Customs :—

Inwards, from Foreign Ports—

		Vessels.	Tons.
With cargoes,	Steam ..	72	23,436
,,	Sailing ..	.. 118	9,737
In ballast,	Steam ..	.. 67	15,510
,,	Sailing ..	.. 72	3,149
	Total	.. 329	51,832

Inwards, Coasting—

With cargoes	.. 549	70,990
In ballast	.. 686	61,711
Total	1235	132,701

The total tonnage of Inward Shipping during each of the past ten years was as follows :—

1897	114,351
1898	111,988
1899	121,199
1900	120,468
1901	138,905
1902	150,717
1903	170,467
1904	169,493
1905	166,450
1906	184,533

The health of the Port has been most satisfactory.

There were 9 deaths accredited to the port, and afterwards allocated to the various localities to which they belonged.

PORT DEATHS, 1906.

		Age.		
16 Feb.	J.J.——	47	South Ward	Drowned in Basin, injured head
1	A.H.——	30	Ramsgate	Drowned in Harbour
2	T.S.——	30	Hull ..	Drowned in Harbour
16	F.R.——	41	East Ward	Drowned in Harbour
1 June	W.N.——	23	East Ward	Drowned at Sea
23 Sept.	T.L.——	43	West Ward	Drowned in Harbour
13 Oct.	R.H.——	66	Brome	Died at Sea
29 Nov.	A.K.——	42	Aberdeen	Enteric
2 Dec.	J.R.——	30	Aberdeen	Drowned in Harbour

The number and nationality of ships entering the Port was as follows :—

British	683
French	30
Norwegian	40
Dutch	8
German	5
Swede	37
Belgian	22
Danish	7
Russian	8
Spanish	1
Greek	—
Unknown	—
	841

The ships have been systematically inspected, 39 water casks and 105 men's quarters have been ordered to be cleaned out. No case of illness of any kind has been reported from any trading vessel, other than a fishing vessel.

For the information of the Local Government Board the Sanitary Inspector reports as follows :—

During the year, 41 inspections have been made of Canal Boats. Five have had orders to clean out their cabins. No case of illness has been found on any of the boats, nor any case of overcrowding, The water supply is obtained at Lowestoft, Norwich and Beccles. and stored in stone bottles.

Six boats have entered the Port unregistered. Some of the older boats are being abolished and iron lighters substituted, drawn by a tug. The lighters have no sleeping accommodation.

TABLE I.

Vital Statistics of Whole District during 1906 and Previous Years.

Name of District:—BOROUGH AND PORT OF LOWESTOFT.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1896	26554	866	32·6	108	124	342	12·8	12	6	12	348	13·1
1897	27210	820	30·0	126	153	403	14·8	19	8	16	411	15·1
1898	27883	864	30·9	159	184	449	16·1	26	8	19	460	16·4
1899	28571	858	30·0	121	141	376	13·1	22	10	11	377	13·1
1900	29288	857	29·2	118	137	438	14·9	29	7	10	441	15·0
1901	30026	954	31·7	165	170	444	14·7	28	10	25	459	15·2
1902	30771	959	31·1	118	123	417	13·5	29	8	32	441	14·3
1903	31526	967	30·6	132	136	412	13·0	36	14	34	432	14·0
1904	32320	966	29·8	138	142	430	13·3	30	5	38	463	14·3
1905	33123	934	28·2	105	112	394	11·8	40	17	22	399	12·0
Averages for years 1896—1905.	29727	904	30·4	129	142	410	13·8	27	9	22	423	14·2
1906	33946	979	28·8	126	128	453	13·3	42	13	35	475	13·9

* Rates in Colnmns 4, 8 and 13 calculated per 1000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.

Area of District in acres (exclusive of area covered by water		2,178.
Total population at all ages	...	29,850
Number of inhabited houses	...	6,065
Average number of persons per house		4·9

At Census of 1901.

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions, the deaths in which have been distributed among the several localities in the District.
General Hospital.	Oulton Workhouse.	General Hospital.
Convalescent Home.	Small Pox Hospital.	Isolation Hospital.
Isolation Hospital.		Convalescent Home.

Is the Union Workhouse within the District?—No.

TABLE II.

Vital Statistics of Separate Localities in 1906 and previous years.

Name of District—BOROUGH AND PORT OF LOWESTOFT.

Names of Localities.	1—For WHOLE DISTRICT.				2.—NORTH WARD.				3.—SOUTH WARD.				4.—EAST WARD.				5.—WEST WARD.			
YEAR.	Population estimated to middle of each year. *a*	Births registered. *b*	Deaths at all Ages. *c*	Deaths under 1 year. *d*	Population estimated to middle of each year. *a*	Births registered. *b*	Deaths at all Ages. *c*	Deaths under 1 year. *d*	Population estimated to middle of each year. *a*	Births registered. *b*	Deaths at all Ages. *c*	Deaths under 1 year. *d*	Population estimated to middle of each year. *a*	Births registered. *b*	Deaths at all Ages. *c*	Deaths under 1 year. *d*	Population estimated to middle of each year. *a*	Births registered. *b*	Deaths at all Ages. *c*	Deaths under 1 year. *d*
1896 ...	26,554	866	338	108	7233	262	92	26	5852	150	69	20	5200	150	55	11	7295	304	109	51
1897 ...	27,210	820	397	126	7450	256	116	44	6000	154	75	24	5211	154	71	18	7400	256	98	35
1898 ...	27,883	883	442	157	7450	275	146	57	6000	187	88	36	5211	146	88	30	7400	275	99	35
1899 ...	28,571	858	363	121	7500	252	103	34	6270	188	74	28	5250	157	58	16	7433	261	99	41
1900 ...	29,288	866	419	118	7600	268	137	37	6500	175	83	17	5330	171	90	24	7454	252	109	40
1901 ...	30,026	948	459	165	8503	322	153	59	7468	198	92	30	5854	154	98	36	8201	274	108	40
1902 ...	30,771	959	441	118	8725	287	147	46	7649	205	117	22	5994	185	83	19	8403	282	94	31
1903 ...	31,536	969	432	132	8844	311	137	42	7922	185	112	24	6032	146	75	26	8738	327	108	40
1904 ...	32,320	966	463	138	9067	282	155	42	8142	220	91	25	6103	157	86	24	9008	307	131	47
1905 ...	33,123	934	399	105	9361	293	94	27	8308	201	98	19	6152	140	91	22	9302	300	116	37
Averages of Years 1896 to 1905	29,728	906	415	128	8173	281	128	41	7011	185	89	25	5633	156	79	23	8063	284	107	39
1906 ...	33,946	979	475	126	9664	304	151	53	8526	224	106	13	6229	152	94	23	9527	299	124	37

Notes.—(*a*) The separate localities adopted for this table should be areas of which the population are obtainable from the census returns, such as wards, parishes, or groups of parishes or registration sub-districts. Block 1 may, if desired, be used for the whole district; and blocks 2, 3, &c., for the several localities. In small districts without recognized divisions of known population this Table need not be filled up.

(*b*) Deaths of residents occurring in public institutions beyond the district are to be included in sub-columns *c* of this Table, and those of non-residents registered in public institutions in the district excluded. (See note on Table I as to meaning of terms "resident" and "non-resident.")

(*c*) Deaths of residents occurring in public institutions, whether within or without the district, are to be allotted to the respective localities according to the addresses of the deceased.

(*d*) Care should be taken that the gross totals of the several columns in this Table respectively equal the corresponding totals for the whole districts in Tables I and IV: thus, the totals of sub-columns *a*, *b*, and *c*, should agree with the figures for the year in the columns 2, 3, and 12, respectively, of Table I: the gross total of the sub-columns *c* should agree with the total of Column 2 in Table IV, and the gross total of sub-columns *d* with the total of Column 3 in Table IV.

TABLE III.

Cases of Infectious Disease notified during the year 1906.

Name of District—BOROUGH AND PORT OF LOWESTOFT.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							Total Cases notified in each locality.					No. of Cases removed to Hospital from each locality.				
		At Ages† —Years.															
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards	1 North Ward.	2 South Ward.	3 East Ward.	4 West Ward.	5 Port.	1 North Ward.	2 South Ward.	3 East Ward.	4 West Ward. (H)	5 Port.
Small-pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	37	—	10	19	5	3	—	12	10	7	8	—	8	8	5	6	—
Membraneous croup ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	21	1	—	2	3	14	1	10	2	3	5	1	—	—	—	—	—
Scarlet fever	101	2	30	45	13	11	—	44	15	25	17	—	35	8	22	12	—
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric fever	17	—	1	4	7	5	—	8	5	—	3	1	4	3	1	1	1
Relapsing fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever ...	2	—	—	—	1	1	—	—	2	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	-	—	—
Chicken pox	47	4	23	18	2	—	—	13	16	5	13	—	—	—	—	—	—
Totals	225	7	64	88	31	34	1	87	50	40	46	2	47	19	28	19	1

NOTES.—The localities adopted for this table should be the same as those in Tables II and IV.

State in space below the name of the Isolation Hospital, if any, to which residentts in the district, suffering from infectious disease, are usually sent. Mark (H) the locality in which it is situated, or if not within the district, state where it is situated, and in what district. Mark (W) the locality in which a workhouse is situated.

* This space may be used for record of other diseases the notification (compulsory or voluntary) of which is in force in the district.

† These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by enquiry or otherwise, has obtained the necessary information.

Isolation Hospital:—SANATORIUM, ROTTERDAM ROAD, LOWESTOFT.

Small Pox Hospital:—CARLTON COLVILLE, RURAL DISTRICT MUTFORD AND LOTHINGLAND.

TABLE IV.

Causes of, and Ages at, Death during Year 1906.

Name of District:—BOROUGH OF LOWESTOFT.

(See Notes at Back).

Causes of Death.	Deaths in or belonging to whole District at subjoined ages.							Deaths in or belonging to Localities (at all ages)				Total Deaths in Public Institutions in the District.
	All ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	North Ward	South Ward	East Ward	West Ward	
1	2	3	4	5	6	7	8	9	10	11	12	13
Small-pox	—	—	—	—	—	—	—	—	—	—	—	—
Measles	7	—	6	1	—	—	—	1	1	3	2	—
Scarlet Fever	2	—	1	1	—	—	—	1	—	—	1	1
Whooping-cough	6	2	4	—	—	—	—	1	—	2	3	2
Diphtheria and membranous croup	5	—	3	2	—	—	—	2	1	1	1	3
Croup	2	1	1	—	—	—	—	2	—	—	—	—
Fever { Typhus	—	—	—	—	—	—	—	—	—	—	—	—
Fever { Enteric	1	—	—	—	1	—	—	—	—	—	1	1
Fever { Other continued ...	—	—	—	—	—	—	—	—	—	—	—	—
Epidemic influenza .	2	—	—	—	—	1	1	1	—	1	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa (*See* notes at back)	33	25	7	—	—	—	1	17	4	6	6	1
Enteritis (*See* notes at back)	7	4	1	—	1	—	1	3	2	—	2	1
Puerperal Fever ... ... (*See* notes at back)	2	—	—	—	2	—	—	—	1	—	1	—
Erysipelas	2	—	1	—	—	1	—	1	—	—	1	1
Other septic diseases ...	4	1	—	—	—	3	—	1	1	1	1	2
Phthisis (*See* notes at back)	29	—	1	—	6	19	3	8	10	5	6	—
Other tubercular diseases ..	6	2	1	—	—	2	1	2	2	2	—	1
Cancer, malignant disease (*See* notes at back)	19	—	—	—	—	11	8	4	5	7	3	2
Bronchitis	36	5	5	1	—	7	18	15	4	3	14	—
Pneumonia	26	9	7	—	2	6	2	6	8	6	6	6
Pleurisy	—	—	—	—	—	—	—	—	—	—	—	—
Other diseases of Respiratory organs	2	—	—	—	—	1	1	1	—	—	1	—
Alcoholism / Cirrhosis of liver ...	8	—	—	—	—	8	—	2	1	1	4	1
Venereal diseases	6	4	—	—	—	2	—	3	1	2	—	—
Premature birth	26	26	—	—	—	—	—	9	2	5	10	—
Diseases and accidents of parturition	7	4	—	—	1	2	—	2	—	1	4	—
Heart diseases	44	—	—	—	2	19	23	11	19	6	8	1
Accidents	24	3	3	2	3	8	5	7	6	5	6	13
Suicides	1	—	—	—	—	1	—	—	1	—	—	—
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	....
....	.....	...	.....	.....	.....	.....	... ..	. ...	.....	.....	.....	.....
All other causes	168	40	6	3	6	49	64	51	37	37	43	6
All causes	475	126	47	10	24	140	128	151	106	94	124	42

NOTES.—

(*a*) In this Table all deaths of "Residents" occurring in public institutions, whether within or without the district, are to be included with the other deaths in the columns for the several age groups (columns 2-8). They are also, in columns 9-15, to be included among the deaths in their respective "Localities" according to the previous addresses of the deceased as given by the Registrars. Deaths of "Non-residents" occurring in public institutions in the district are in like manner to be excluded from columns 2-8 and 9-15 of this Table.

(*b*) *See* notes on Table I. as to the meaning of "Residents" and "Non-residents," and as to the "Public Institutions" to be taken into account for the purposes of these Tables. The "Localities" should be the same as those in Tables II. and III.

(*c*) All deaths occurring in public institutions situated within the district, whether of "Residents" or of "Non-residents," are, in addition to being dealt with as in note (*a*), to be entered in the last column of this Table. The total number in this column should equal the figures for the year in column 9, Table I.

(*d*) The total deaths in the several "Localities" in columns 9-15 of this Table should equal those for the year in the same localities in Table II., sub-columns c. The total deaths at all ages in column 2 of this Table should equal the gross total of columns 9-15, and the figures for the year in column 12 of Table I.

(*e*) Under the heading of "Diarrhœa" are to be included deaths certified as from diarrhœa, alone or in combination with some other cause of ill-defined nature; and also deaths certified as from

Epidemic enteritis;
Zymotic enteritis;
Epidemic diarrhœa. Summer diarrhœa;
Dysentery and dysenteric diarrhœa;
Choleraic diarrhœa, cholera, cholera nostras (in the absence of Asiatic cholera).

Under the heading of "Enteritis" are to be included those certified as from Gastro-enteritis, Muco-enteritis, and Gastric catarrh, unless from information obtained by enquiry from the certifying practitioner or otherwise, the Medical Officer of Health should have reason for including such deaths, especially those of infants, under the specific term "Diarrhœa." Under the headings of "Cancer," "Phthisis" and "Puerperal fever" should be included all registered deaths from causes comprised within these general terms.

Deaths from diarrhœa secondary to some other well-defined disease should be included under the latter.

In recording the facts under the various headings of Tables I., II., III. and IV., attention has been given to the notes on the Tables.

A. MARSHALL,

Medical Officer of Health.

February, 1907.

TABLE V.

Infantile Mortality during the Year 1906.

BOROUGH OF LOWESTOFT.

Deaths from stated Causes in Weeks and Months under one Year of Age.

(*See Notes at back of Table IV.*)

CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under 1 Year.
All Causes—																	
Certified ...	21	5	9	2	37	16	10	4	9	4	5	6	6	8	7	4	116
Uncertified ...	2	—	—	2	4	2	1	—	2	1	—	—	—	—	—	—	10
Common Infectious Diseases—																	
Small-pox ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chicken-pox ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria : Croup...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough ...	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	2
Diarrhœal Diseases— (*See Notes to Table IV.*)																	
Diarrhœa, all forms	—	—	—	—	—	6	1	1	2	1	3	4	—	2	3	2	25
Enteritis, Muco-enteritis, Gastro-enteritis ...	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	2
Gastritis, Gastro-intestinal Catarrh	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wasting Diseases—																	
Premature Birth ...	13	3	3	1	20	2	2	—	—	—	—	—	—	—	1	—	25
Congenital Defects.. (*See Notes to Table IV.*)	7	1	2	1	11	1	—	—	—	1	1	1	—	—	—	—	15
Injury at Birth ...	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	2
Want of Breast-milk, Starvation ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Atrophy, Debility, Marasmus ...	—	—	—	—	—	3	—	2	4	—	—	—	—	2	—	—	11
Tuberculous Diseases—																	
Tuberculous Meningitis (*See Notes to Table IV.*)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculous Peritonitis: Tabes Mesenterica	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Other Tuberculous Diseases ... (*See Notes to Table IV.*)	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Other Causes—																	
Erysipelas ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	1	1	—	—	—	—	—	—	—	1	—	3
Rickets	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1
Meningitis (*not Tuberculous*)	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	2
Convulsions ...	1	—	2	—	3	4	4	1	—	2	—	—	1	—	—	1	16
Bronchitis ...	—	—	—	—	—	—	—	—	1	—	—	—	1	—	2	—	4
Laryngitis ..	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Pneumonia ..	—	—	—	1	1	—	1	—	2	—	1	1	2	—	—	1	9
Suffocation, overlying	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1
Other Causes ...	—	1	2	—	3	—	1	—	1	—	—	—	—	—	—	—	5
	23	5	9	4	41	18	11	4	11	5	5	6	6	8	7	4	126

District (or sub-division) of East Suffolk.

Births in the year { legitimate, 934, illegitimate, 45.

Deaths from all Causes at all Ages, 475.

Population, Estimated to middle of 1906, 33,946.

TABLE VI.

Cases of Infectious Diseases Notified since 1890.

	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Small Pox ...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	..
Scarlet Fever ...	3	8	32	87	56	19	55	157	53	161	124	243	266	102	25	33	101
Diphtheria ...	10	5	62	112	65	46	46	29	15	21	82	85	73	49	44	47	37
Typhoid Fever ...	64	30	21	63	31	41	36	44	46	43	13	11	19	12	19	16	17
Puerperal Fever	5	4	5	2	4	2	4	1	3	1	...	1	1	4	1	4	2
Erysipelas ...	27	17	14	27	15	16	17	17	14	21	21	18	27	21	14	15	21
Measles	...	...	...	...	...	...	24	8	83	725	441	347	72	210	799	120	*...
Chicken Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	35	110	65	47

* Not notifiable.

TABLE VII.

Annual Death-rates per 1000 from all Causes, and from several Zymotic Diseases, during the year 1906.

Cols.	Births 1	All Causes 2	Principal Zymotic Diseases Cols. 4-10 3	Small Pox 4	Measles 5	Scarlet Fever 6	Diph-theria 7	Whoop-ing Cough 8	Fever 9	Diar-rhœa 10	Deaths under 1 Year per 1000 Births 11
England and Wales	27·0	15·4	1·73	0·00	0·27	0·10	0·17	0·23	0·09	0·87	133
76 Great Towns	27·9	15·9	2·24	0·00	0·40	0·12	0·19	0·28	0·09	1·16	145
142 Smaller Towns	26·5	14·5	1·71	0·00	0·22	0·09	0·17	0·20	0·09	0·94	138
England and Wales, less the 218 Towns	26·3	15·1	1·18	0·00	0·14	0·08	0·16	0·19	0·09	0·52	116
Lowestoft	**28·8**	**13·9**	**1·55**	**0·00**	**0·20**	**0·05**	**0·14**	**0·17**	**0·02**	**0·97**	**128**

TABLE VIII.

Return to Dr. A. MARSHALL, Medical Officer of Health, of Number of Houses, &c., in the Borough.*

BOROUGH OF LOWESTOFT.

Name of Ward.	Number of Houses, &c.	Number of Cottages £7 10s. and under.	Total.	Inhabited.	Uninhabited.	Total.
NORTH	1010	1152	2162	2120	42	2162
SOUTH	1592	710	2302	2157	145	2302
EAST	1008	584	1592	1529	63	1592
WEST	1281	897	2178	2140	38	2178
	4891	3343	8234	7946	288	8234

F. GAGE, *Rate Collector*,
Town Hall, Lowestoft.

* This table includes, in addition to domestic dwellings, all separate buildings which are liable to be inhabited for purposes of trade or business or occasional meeting.

TABLE IX.

LOWESTOFT WATER AND GAS COMPANY.

Return of Houses in Lowestoft and Kirkley supplied with Company's Water for Domestic Purposes. Number of W.C.s and Baths. Year ending 25th December, 1906.

Total No. of Houses supplied.	Houses with 1 W.C.	Houses with 2 W.C.s.	Houses with 3 W.C.s.	Houses with 4 W.C.s.	Houses with 5 W.C.s.	Houses with 6 W.C.s.	Houses with 7 W.C.s.	Houses with 1 Bath.	Houses with 2 Baths.	Houses with 3 Baths	Total No. of Houses with W.C.s	Total No. of Houses with Baths.	Total No. of Houses without W.C.s.
7085	5169	1292	128	18	1	1	1	705	3	1	6610	709	475

LOWESTOFT,
March, 1906.

For the Lowestoft Water and Gas Company,
JOSEPH HAWKSLEY,
Manager.

Meteorological Report.

To the Mayor, Aldermen, and Councillors of the Borough of Lowestoft.

Gentlemen,

I beg to present the Annual Report of the Meteorological Department for the year 1906.

It has again been an excellent one as regards sunshine and rainfall; the number of hours recorded by the Campbell-Stokes Sunshine Recorder being above the average of the leading Health Resorts. This instrument, unlike the Jordan Photographic Recorder, receives only absolutely unclouded sunshine.

In their annual review of the distribution of sunshine during 1906, *The Lancet* again deemed Lowestoft worthy of notice; the following is extracted :—

> "During 1905 the most sunny spot in the kingdom was Lowestoft, and again last year it was very high on the list."

Many interesting enquiries relative to Meteorological matters have been received verbally and through the post; full particulars have in all cases been given.

Sunshine in 1906.

Station.	No. of hours.	Station.	No. of hours.
East—		*West*—	
Aberdeen	1525	Aberystwith ..	1628
Scarborough ..	1581	Llandudno ..	1683
Skegness	1866	Southport	1626
Lowestoft	**1993**	Blackpool	1679
Clacton-on-Sea ..	1996	Douglas, Isle of Man	1697
Margate	1874	*Inland*—	
		Glasgow	1174
South—		Harrogate	1497
Hastings	1991	Manchester.. ..	1143
Brighton	1868	Nottingham ..	1453
Worthing	2011	Birmingham ..	1251
Bournemouth ..	1969	Bath	1808
Torquay	2028	London, Westminster	1513
Jersey	2003		

Comparative Statistics for the year 1906.

Station.	Mean Temperature.		Mean Daily Range of Temperature.	Total Rainfall.
	The Year.	June to Sept.		
Lowestoft . .	**49·2**	**59·4**	**11·0**	**23·20**
Other Health Resorts :				
Scarborough . .	49·4	59·5	11·6	23·00
Douglas . .	48·2	56·3	11·4	43·08
Harrogate . .	47·5	58·0	13·7	30·90
Blackpool . .	48·4	57·9	11·3	32·76
Llandudno . .	50·3	59·7	10·6	31·57
Buxton . .	45·7	56·0	13·1	45·58
Bettws-y-Coed	48·9	58·3	13·9	53·34
Cromer . .	49·6	60·0	12·3	22·07
Aberystwith . .	49·7	58·5	9·3	37·18
Felixstowe . .	49·8	60·3	12·0	22·42
Clacton . .	49·8	60·8	11·1	19·63
Southend . .	50·0	61·4	14·6	21·60
Margate . .	51·1	61·7	11·3	20·42
Bath	50·0	60·1	15·7	27·34
Ilfracombe . .	51·8	60·4	8·7	39·25
Folkestone . .	50·1	60·0	11·1	30·06
Brighton . .	50·7	60·5	11·4	28·02
Worthing . .	50·2	60·0	12·0	30·43
Eastbourne . .	50·7	60·3	11·6	32·64
Bournemouth . .	50·6	60·7	13·4	32·47
Ventnor . .	51·4	60·8	10·7	31·93
Torquay . .	51·5	60·7	11·6	28·54
Plymouth . .	51·0	60·0	11·4	33·40
Scilly (St.Mary's)	52·4	60·1	6·9	29·76

The Barometer, Lowestoft, 1906.

(Corrected for temperature and reduced to sea-level).

Month.	Mean pressure of the air in the month.	Highest in month.	Date.	Lowest in month.	Date.	Mean pressure for latitude.	Difference from this mean in 1906.
	Inches.	Inches.		Inches.		Inches.	Inches.
Jan.	29·920	30·62	23	29·08	6	29·936	−0·016
Feb.	29·735	30·30	6	28·85	10	29·940	−0·205
Mar.	29·962	30·43	3	28·99	11	29·880	+0·082
April	30·083	30·65	9	29·31	28	29·950	+0·133
May	29·854	30·23	5	29·44	16	29·981	−0·127
June	30·114	30·38	5	29·48	1	29·979	+0·135
July	30·019	30·27	9	29·77	18	29·958	+0·061
Aug.	29·976	30·45	28	29·56	25	29·945	+0·031
Sept.	30·189	30·64	27	29·52	15	29·935	+0·254
Oct.	29·844	30·35	25	29·29	30	29·893	−0·049
Nov.	29·852	30·55	23	29·10	18	29·890	−0·038
Dec.	29·909	30·66	20	29·03	26	29·945	−0·036
		Highest of all.		Lowest of all.			
Mean	29·954	30·66	Dec.	28·85	Feb.	29·937	+0·017

The barometer is thus seen to have been above the local average on six months of the year, but the mean difference in the year was ess than 2-100ths of an inch.

Result of Observations on Temperature and Rain in 1906.

1906.	TEMPERATURE OF THE AIR IN SHADE.				RAINFALL.	
Month.	Highest.	Lowest.	Mean Temp. of Air.	Mean Humidity.	Monthly Fall.	Days of 0.01 inch and above.
	°	°	°	%	Ins.	
January ..	53·3	31·0	40·9	88	3·75	18
February	47·9	27·0	38·0	87	2·42	21
March ..	66·7	27·4	41·4	80	1·31	19
April ..	68·7	29·9	43·6	76	0·46	8
May ..	73·0	37·4	50·7	82	1·44	10
June ..	76·1	39·6	54·7	79	1·66	10
July ..	79·0	45·6	60·8	79	0·25	5
August ..	77·0	47·6	62·8	76	0·53	8
September	81·2	41·6	59·3	77	1·57	11
October ..	69·2	38·1	54·9	86	2·54	14
November	59·4	30·6	46·8	90	3·81	15
December	52·8	15·3	36·1	89	3·46	19
			degs. Fahr.			
Mean Temperature of the year			49·1	Total Rain	23·20 inches	158 Days.
,, ,, June to September, inclusive ..			59·4			

Earth Temperature.

The highest and lowest readings of thermometers placed below the surface of the soil at depths stated below. These readings show extremes of the year, which for practical purposes are more important than the means.

Readings made at 9 a.m. daily.

BELOW SURFACE.	HIGHEST IN THE YEAR.	DATE—1906.	LOWEST IN THE YEAR.	DATE—1906.
	°		°	
One foot	67·9	3rd Aug.	34·6	10th Feb.
Two feet	64·4	4th Sept.	36·9	14th Feb.
Four feet	60·6	11th Sept.	39·6	17th Feb.

The thermometer at 4 feet rose to 55 degrees on 23rd June, reached its maximum, 60·6 degrees on 11th September; was down to 50·0 degrees on 21st November, and 42·2 on 31st December.

Sea Surface Temperature at Pier Head, Lowestoft, 1906.

MONTH.	HIGHEST.	MEAN.	MONTH.	HIGHEST.	MEAN.
	°	°		°	°
January	40·5	39·2	July ..	66·2	62·3
February	40·0	37·9	August ..	66·5	64·7
March ..	41·5	39·6	September	66·5	61·1
April ..	46·5	44·5	October ..	59·8	56·6
May ..	56·5	51·2	November	53·0	48·9
June ..	61·2	57·1	December	46·0	40·7

Bright Unclouded Sunshine, Lowestoft, 1906.

Taken by a Campbell Stokes' Lens-Burning Sunshine Recorder.

1906.	TOTAL DURATION.		GREATEST DAILY.			SUNLESS DAYS.
	Hrs.	Mins.	Hrs.	Mins.	Date.	
January ..	77	41	7	6	31	9
February ..	86	49	8	0	14	6
March ..	132	5	10	42	17	5
April ..	266	48	13	6	30	1
May ..	193	55	14	10	28	2
June ..	228	31	15	0	6	3
July ..	275	34	14	30	5	0
August ..	246	56	14	0	6	0
September ..	236	41	12	0	2 & 3	0
October ..	130	44	9	30	9	2
November ..	57	13	6	42	20	12
December ..	60	2	7	6	22	11
			Greatest daily.			
TOTAL ..	1992	59	15	0	Month. June.	51

In comparing these figures with those recorded at other Observatories, due regard should be paid to the form of Sunshine Recorder in use. Higher totals would be obtained by the Jordan Photographic Recorder, which is very generally used.

It is an interesting fact that during the four Summer months there was a daily average of 8 hours 5 mins. of sunshine, and for the whole year of over 5 hours per diem.

Report on the direction of the Wind during 1906.

From Observations taken twice daily, i.e.—9 a.m. and 9 p.m.

1906	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Winds of Greatest Force.
Jan.	2	2	2	1	5	11	22	15	2	N.W.—S.W.
Feb.	3	4	3	1	3	8	15	16	3	N.—S.W.
March	7	9	9	1	1	6	15	13	1	W.—E.
April	7	14	8	6	3	5	9	5	3	E.
May	9	9	4	4	4	12	12	5	3	N.E.
June	8	13	10	4	1	4	6	6	8	E.
July	3	9	7	7	4	5	12	9	6	N.W.
Aug.	2	3	6	3	6	10	17	11	4	—
Sept.	7	14	8	2	7	4	5	7	6	E.
Oct.	5	1	1	3	8	17	20	6	1	S.W.
Nov.	3	5	5	3	3	9	20	12	0	N.E.
Dec.	3	2	4	5	1	4	18	25	0	E.—N.
	59	85	67	40	46	95	171	130	37	

It will be seen from the above that the prevalent winds were from points between the S.W. and N.W.

Notes on the Weather of 1906.

—o—

JANUARY.—The year opened with a cool, bright day, with fresh southerly breeze blowing a gale at times. After the fourth day the weather became much milder, with frequent rain, above half an inch being recorded on two successive days. These conditions continued until the 21st, after which it remained fine and mild until the finish. Sunshine above the average. The exposed thermometer on the grass fell to below freezing point on ten occasions. Mean temperature for the month, $3\frac{1}{2}^{\circ}$ above the average.

FEBRUARY.—A more seasonable month than the preceding one as regards temperature. Light falls of snow were fairly frequent during the early part, but a mild period set in towards the end. Sunshine was well in evidence, there being only six sunless days. A sharp thunderstorm broke over the town on the 8th, accompanied by a strong breeze and heavy rain, followed by snow. Frost was recorded on the grass on 21 days, the lowest temperature being 20·5° on the 19th. Mean temperature for month, $\frac{1}{2}^{\circ}$ below average.

MARCH.—A variable month, with some great extremes of temperature, rising to 66·7° on the 7th, and falling to 27·4° on 13th in the shade. Sunshine well up to the average, an excellent record of $10\frac{3}{4}$ hours was taken on the 17th. Snow fell rather frequently from the 19th to 25th, with an east wind. Rainfall, including melted snow, slightly below the average. Mean temperature for the month, 1° above the average.

APRIL.—With the exception of six successive days of showers, glorious weather was enjoyed throughout this month,with an extraordinary amount of sunshine. Records of over ten hours were taken on fifteen days, and there was only one sunless day. On the 12th the day temperature rose to 68·7 in the shade, but there was a

sprinkling of frost occasionally at night, the mean temperature for the month being only just below the average. The rainfall was over an inch below the average.

MAY.—This month was more changeable than the preceding one, with fitful temperatures, rising to 73° on the 28th and falling to just below freezing point on the 18th. A thunderstorm occurred on the 13th. After the 26th a westerly breeze set in with a decided rise of temperature, the conditions being quite summer like. Mean temperature for the month, 1° above the average.

JUNE.—Delightful weather was enjoyed throughout, with only three sunless days. The temperatures were normal and rainfall about the average. A thunderstorm broke over the town on the 1st, and a Solar halo, a somewhat rare phenomenon, was observed on the 7th.

JULY.—An ideal month, with only $\frac{1}{4}$ in. of rain, being more than two inches below the average. Sunshine was very plentiful throughout, not one day being sunless.

The highest temperature recorded was 79°, the heat, however, was considerably tempered by a refreshing northerly breeze. Mean temperature for the month, less than a degree above the average.

AUGUST.—The fine weather continued throughout this month with an abundance of sunshine and very little rain. Refreshing sea breezes were enjoyed by day, invariably falling to a calm evening. Thunderstorms were frequently observed in the neighbourhood, but on only four occasions did they break over the town. Mean temperature for the month, 3° above the average.

SEPTEMBER.—There was but little change in the weather during this month. Sunshine was recorded every day, and the rainfall was considerably below the average. After the 16th the wind settled in the east, accompanied by very equable temperatures. Mean temperature for the month, $2\frac{1}{2}$° above the average.

OCTOBER.—An extraordinarily warm month, with only two sunless days, the average temperature being over $5\frac{1}{2}$° above the average. Thunderstorms were recorded on the 23rd and 29th.

NOVEMBER.—Although the weather continued mild there was a decided change, during the early part of this month, to rainy conditions with fog on the 5th. A thunderstorm occurred on the 4th, with heavy rain. Mean temperature for the month, $2\frac{1}{2}^{\circ}$ above the average.

DECEMBER.—Cold, seasonable weather set in after the 9th, signalized by a thunderstorm with a heavy squall of snow. Frost was frequent, and on the 26th, the exposed thermometer registered 20° of frost. The year closed with a seasonable day, but wet evening.

The local averages are in all cases taken from Mr. S. H. Miller's Reductions of Meteorological Observations made at Lowestoft, from 1879 to 1898.

CHARLES W. EDWARDS,
Borough Meteorologist, Lowestoft.